## **CLAIMS**

A method for controlling an antenna system, the method comprising:
dwelling on at least one of a plurality of antennas;
determining a gain for said dwelled-on at least one of a plurality of antennas;
determining at least one of a plurality of signal quality metrics for said dwelled-on
at least one of a plurality of antennas; and

selecting for signal processing a portion of said dwelled-on at least one of a plurality of antennas based on said determined gain and said determined at least one of a plurality of signal quality metrics from said dwelled-on at least one of a plurality of antennas.

- 2. The method according to claim 1, further comprising selecting a starting antenna from said at least one of a plurality of antennas.
- 3. The method according to claim 2, further comprising selecting said starting antenna based on a predetermined criteria.
- 4. The method according to claim 2, further comprising selecting said starting antenna based on random selection.
- 5. The method according to claim 2, further comprising selecting said starting antenna based on prior history said selection of said portion of dwelled-on at least one of a plurality of antennas.
- 6. The method according to claim 2, further comprising determining a starting gain for said starting antenna using an automatic gain control.
- 7. The method according to claim 1, further comprising selecting antenna dwelling order based on a predetermined criteria.

- 8. The method according to claim 1, further comprising determining said at least one of said determined gain for said dwelled-on at least one of a plurality of antennas based on said at least one of a plurality of signal quality metrics, on at least one of a plurality of power coupling parameters, and/or a portion of said determined gain for said dwelled-on at least one of a plurality of antennas.
- 9. The method according to claim 1, wherein said at least one of a plurality of signal quality metrics may be an estimated received power, a received power, a signal-to-noise ratio, a bit error rate, a packet error rate, a propagation channel characteristic, an/or a channel interference.
- 10. The method according to claim 1, further comprising selecting said portion of said dwelled-on at least one of a plurality of antennas based on meeting a specified range of values for at least one of said plurality of signal quality metrics.
- 11. A machine-readable storage having stored thereon, a computer program having at least one code section for controlling an antenna system, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

dwelling on at least one of a plurality of antennas;

determining a gain for said dwelled-on at least one of a plurality of antennas;

determining at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas; and

selecting for signal processing a portion of said dwelled-on at least one of a plurality of antennas based on said determined gain and said determined at least one of a plurality of powers from said dwelled-on at least one of a plurality of antennas.

12. The machine-readable storage according to claim 11, further comprising code for selecting a starting antenna from said at least one of a plurality of antennas.

- 13. The machine-readable storage according to claim 12, further comprising code for selecting said starting antenna based on a predetermined criteria.
- 14. The machine-readable storage according to claim 12, further comprising code for selecting said starting antenna based on random selection.
- 15. The machine-readable storage according to claim 12, further comprising code for selecting said starting antenna based on prior history said selection of said portion of dwelled-on at least one of a plurality of antennas.
- 16. The machine-readable storage according to claim 12, further comprising code for determining a starting gain for said starting antenna using an automatic gain control.
- 17. The machine-readable storage according to claim 11, further comprising code for selecting antenna dwelling order based on a predetermined criteria.
- 18. The machine-readable storage according to claim 11, further comprising code for determining said at least one of said determined gain for said dwelled-on at least one of a plurality of antennas based on said at least one of a plurality of signal quality metrics, on at least one of a plurality of power coupling parameters, and/or a portion of said determined gain for said dwelled-on at least one of a plurality of antennas.
- 19. The machine-readable storage according to claim 11, wherein said at least one of a plurality of signal quality metrics may be an estimated received power, a received power, a signal-to-noise ratio, a bit error rate, a propagation channel characteristic, an/or a channel interference.

- 20. The machine-readable storage according to claim 11, further comprising code for selecting said portion of said dwelled-on at least one of a plurality of antennas based on meeting a specified range of values for at least one of said plurality of signal quality metrics.
  - 21. A system for controlling an antenna system, the system comprising: a processor that dwells on at least one of a plurality of antennas:

said processor determines a gain said of dwelled-on at least one of a plurality of antennas;

said processor determines at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas; and

said processor selects for signal processing, a portion of said dwelled-on at least one of a plurality of antennas based on said determined gain and said determined at least one of a plurality of powers from said dwelled-on at least one of a plurality of antennas.

- 22. The system according to claim 21, wherein said processor selects a starting antenna from said at least one of a plurality of antennas.
- 23. The system according to claim 22, wherein said processor selects said starting antenna based on a predetermined criteria.
- 24. The system according to claim 22, wherein said processor selects said starting antenna based on random selection.
- 25. The system according to claim 22, wherein said processor selects said starting antenna based on prior history of said selection of said portion of dwelled-on at least one of a plurality of antennas.

- 26. The system according to claim 22, wherein said processor determines a starting gain for said starting antenna using an automatic gain control.
- 27. The system according to claim 21, wherein said processor selects antenna dwelling order based on a predetermined criteria.
- 28. The system according to claim 21, wherein said processor determines said at least one of said determined gain for said dwelled-on at least one of a plurality of antennas based on said at least one of a plurality of signal quality metrics, on at least one of a plurality of power coupling parameters, and/or a portion of said determined gain for said dwelled-on at least one of a plurality of antennas.
- 29. The system according to claim 21, wherein said at least one of a plurality of signal quality metrics may be an estimated received power, a received power, a signal-to-noise ratio, a bit error rate, a packet error rate, a propagation channel characteristic, an/or a channel interference.
- 30. The system according to claim 21, wherein said processor selects said portion of said dwelled-on at least one of a plurality of antennas based on meeting a specified range of values for at least one of said plurality of signal quality metrics.